

# PRIMERGY RX200 S3 Server

Options Guide

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## **Certified documentation according to DIN EN ISO 9001:2000**

To ensure a consistently high quality standard and user-friendliness, this documentation was created to meet the regulations of a quality management system which complies with the requirements of the standard DIN EN ISO 9001:2000.

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# 1 Preface

The PRIMERGY RX200 S3 server is an Intel-based server for mid-size networks and large companies. The server is suitable for use as a file server and also as an application, information or Internet server.

## 1.1 Overview of the documentation



PRIMERGY manuals are available in PDF format on the ServerBooks CD which is supplied as part of the ServerView Suite package for every server system.

These PDF files can also be downloaded free of charge from the Internet: At <http://manuals.fujitsu-siemens.com> you will find an overview page showing the online documentation available on the Internet. You can go to the PRIMERGY Server documentation by clicking on *industry standard servers*.

### Concept and target groups

This Options Guide shows you how you can expand and upgrade the server.



#### Caution!

The activities described in this manual may only be performed by specialist personnel with technical training.



How to install/remove the hot-plug components is described in the Operating Manual for the server.

### Additional documentation about the server

The PRIMERGY RX200 S3 documentation comprises the following additional manuals:

- The “Security and other important information” manual (printed copy always supplied with the server, and available as a PDF file on the *ServerBooks* CD supplied)
- The “Guarantee” manual (printed copy always supplied with the server, and available as a PDF file on the *ServerBooks* CD supplied)

- The Operating Manual for PRIMERGY RX200 S3 (PDF available on the *ServerBooks* CD supplied)
- The Technical Manual for the system board D2300 (PDF available on the *ServerBooks* CD supplied)
- The “BIOS Setup” manual (PDF available on the *ServerBooks* CD supplied)
- The “Ergonomics” manual (PDF available on the *ServerBooks* CD supplied).
- The “ServerView Suite” manual (printed copy always supplied with the server, and available as PDF file on the *ServerBooks* CD supplied)
- The “Adaptec HostRAID User’s Guide” (PDF available on the *ServerBooks* CD supplied)
- The “Service Supplement for PRIMERGY RX200 S3” (PDF available on the *ServerBooks* CD supplied)



You can order a supplementary *ServerBooks* CD by sending an e-mail to the following address, quoting your server data:

*Reklamat-PC-LOG@fujitsu-siemens.com*

**Further sources of information:**

- Technical Manual on the relevant rack
- Manual on the monitor
- Manual on *ServerView* Server Management
- Manual on *RemoteView* remote server management
- Documentation on boards and drives
- Documentation on your operating system
- Information files on your operating system

(see also “[Related publications](#)” on page 49)

## 1.2 Extensions and conversions

### Second processor

The system board can be upgraded with a second processor. Only processors of the same type may be used on the system board. The second processor must have the same clock frequency as the first processor.

### Extension of the main memory

The eight slots for the main memory are suitable for FBD533/PC2-4200F or FBD667/PC2-5300F memory modules. Their organization in four memory banks allows fast memory access with four-way interleaving.

Memory modules must always be installed in pairs. A memory bank must always be fully equipped and with the same type of memory modules. For further details see [chapter “Main Memory” on page 21](#).

### CD/DVD drive (option)

The PRIMERGY RX200 S3 Server is equipped with a slimline bay intended for a CD/DVD drive (5.25 x 0.5 inch). For further details see [chapter “CD/DVD Drive” on page 33](#).

### Additional controllers in non-hot-plug PCI slots

The system board has one PCI-X and one PCIe x8 slot. Because of the server's installation height, these can only be used via a riser card. Two different types of riser card are available here:

- Type A: Two slots for PCI-X controller  
Slot #1: 64 bit/100 MHz, low profile, max. length 175 mm  
Slot #2: 64 bit/133 MHz, max. length 175 mm
- Type B: One slot each for a PCI-X and a PCIe controller  
Slot #1: 64 bit/100 MHz, low profile, max. length 175 mm  
Slot #2: PCIe x8, max. length 315 mm



Both slots are **not** hot-pluggable.

For further details see [chapter “Controllers in Non-Hot-Plug PCI Slots” on page 37](#).

## Second power supply unit (option)

As an option, the power supply can be expanded with an extra power supply unit to create a redundant power supply. If a power supply unit fails, the redundant configuration assures continued operation. The defective power supply unit can be replaced during operation. For information on installing the second power supply unit please refer to the operating manual.

## 1.3 Notational conventions

The following notational conventions are used in this manual:



<i>Italics</i>	indicate commands, menu items or software programs.
"Quotation marks"	indicate names of chapters and terms that should be emphasized.
►	text which follows this symbol describes activities that must be performed in the order shown.
 <b>CAUTION!</b>	pay particular attention to text marked with this symbol. Failure to observe this warning may endanger your life, damage the server, or lead to loss of data.
	supplementary information, remarks and tips follow this symbol.

Table 1: Notational conventions

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## 2 Procedure



### CAUTION!

- The actions described in this manual should only be performed by engineers, service personnel or technical specialists.
  - Equipment repairs should only be performed by authorized, qualified staff.
  - Any failure to observe the guidelines in this manual, and any unauthorized openings and improper repairs could expose the user to risks (e.g. electric shock, fire hazards) and could also damage the equipment.
  - Please note that any unauthorized opening of the device will result in the invalidation of the warranty and exclusion from all liability.
- ▶ First of all please familiarize yourself with the safety instructions in the [chapter “Safety Instructions” on page 11ff.](#)
  - ▶ Make sure that all required manuals (see [“Additional documentation about the server” on page 5](#)) are available, printing out the PDF files if necessary.

You will definitely need

- the Operating Manual for the server and
  - the Service Supplement for the server
  - the Technical Manual for the system board.
- ▶ Shut down the server correctly, switch it off, pull out the power plug, and open the server as described in the [chapter “Preparation” on page 17ff.](#)
  - ▶ Extend or upgrade your server as described in the relevant chapter.



How to install/remove the hot-plug components is described in the Operating Manual for the server.

- ▶ Close the server, plug all mains plugs into the power outlets, and switch on the server as described in the [chapter “Completion” on page 41ff.](#)
- ▶ Start the operating system and, if necessary, configure it as required (see the Operating Manual).



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## 3 Safety Instructions



The following safety instructions can also be found in the manual entitled “Safety”.

This device complies with the relevant safety regulations for data processing equipment, including electronic office machines for use in an office environment.

If you have any questions as to whether you can set up the device in your particular environment, please contact your sales outlet or our customer service centre.



### CAUTION!

- The actions described in this manual should only be performed by engineers, service personnel or technical specialists.
- Equipment repairs should only be performed by qualified staff.
- Any failure to observe the guidelines in this manual, and any unauthorized openings and improper repairs could expose the user to risks (e.g. electric shock, fire hazards) and could also damage the equipment.
- Please note that any unauthorized opening of the device will result in the invalidation of the warranty and exclusion from all liability.

### Before setting up



### CAUTION!

- During installation and before operating the device, observe the instructions on environmental conditions for you device.
- If the device is brought in from a cold environment, condensation may form both inside and on the outside of the machine.

Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site. Failure to observe these guidelines can lead to material damage of the device.

- Transport the device only in its original packaging or in packaging which protects it from knocks and jolts.

## Installation and operation



### CAUTION!

- If the rack model is integrated in an installation that receives power from an industrial (public) power supply network with the IEC309 connector, the (public) power supply protection must comply with the requirements for the non-industrial (public) power supply networks for the type A connector.
- The server automatically adjusts to a mains voltage between 100 V and 240 V. Make sure that the local mains voltage is neither above nor below this range.
- This device has safety-tested power cables and must only be connected to properly grounded power outlets.
- Make sure that the power socket on the device or the grounded mains outlet is freely accessible.
- The power switch does not disconnect the device from the mains voltage. To completely disconnect it from the mains voltage, you must remove the power plug from the power outlet.
- Always connect the device and the attached peripherals to the same power circuit. Otherwise you run the risk of losing data if, for example, a power outage occurs and the central processing unit is still running but the peripheral device (e.g. a storage subsystem) has failed.
- Data cables must be adequately shielded to avoid interference.
- For the LAN wiring, the requirements according to standards EN 50173 and EN 50174-1/2 apply. The minimum requirement is the use of a protected LAN line of category 5 for 10/100 Mbps Ethernet, and/or of category 5e for Gigabit Ethernet. The requirements of the specification ISO/IEC 11801 must also be taken into account.
- Route the cables in such a way that they do not form a potential hazard (tripping) and that they cannot be damaged. When connecting the device, refer to the relevant notes in the operating manual.
- Do not connect or disconnect any data transmission cables during a thunderstorm (lightning hazard).



### CAUTION!

- Be careful to ensure that no objects (e.g. jewelry, paper clips etc.) or liquids get inside the device (electric shock, short circuit).
- In emergencies (e.g. damaged casing, elements, or cables, penetration of liquids or foreign bodies), switch off the device immediately, remove the power connector from the grounded power outlet, and contact your customer service centre.
- Proper operation of the device (in accordance with IEC 60950/DIN EN 60950) is only ensured if the casing is completely assembled and the rear covers for the installation openings have been put in place (electric shock, cooling, fire protection, interference suppression)
- Install only system extensions that satisfy the requirements and rules governing safety, electromagnetic compatibility, and telecommunications terminal equipment.

If you install other extensions, you may damage the system or violate these safety regulations.

Information on which system extensions are suitable can be obtained from the customer service centre or your sales outlet.

- The components marked with a warning label (e.g. lightning symbol) may only be opened, removed, or exchanged by authorized, qualified personnel.
- The warranty is invalidated if the device is damaged during the installation or replacement of system extensions.
- You may set only those resolutions and refresh rates specified in the operating manual for your monitor.  
Otherwise, you may damage the monitor. If you are in any doubt, contact your sales outlet or customer service centre.

## Batteries



### CAUTION!

- Incorrect replacement of batteries may lead to risk of explosion. The batteries may only be replaced with identical batteries or with a type recommended by the manufacturer (see the Technical Manual for the system board under [“Related publications” on page 49](#)).
- Do not throw batteries into the trash can. They must be disposed of in accordance with local regulations concerning special waste.
- Replace the lithium battery on the system board in accordance with the instructions in the Technical Manual for the system board (see [“Related publications” on page 49](#)).
- All batteries containing pollutants are marked with a symbol (a crossed-out garbage can). The marking also contains the chemical symbol of the heavy metal that determines the classification as a pollutant:  
  
Cd Cadmium  
Hg Mercury  
Pb Lead

## Notes on handling CDs in CD-ROM/DVD drives



### CAUTION!

- Use only CDs in proper condition in the CD-ROM/DVD drive of your server to prevent data loss, damage to the device, or injuries.
- Therefore, check each CD for damage, cracks, breakage etc. before inserting it in the drive.
- Please note that any additional labels applied may change the mechanical properties of a CD and cause imbalance.
- Damaged and imbalanced CDs can break at high drive speeds (data loss).
- Under certain conditions, sharp-edged pieces of broken CDs can penetrate the cover of the drive (cause damage to the device) and be thrown out of the device (therefore causing injury to uncovered body parts, particularly the face or neck).



To protect the CD-ROM/DVD drive and prevent mechanical damage, as well as premature wearing of the CDs, you should observe the following advice:

- Only insert the CDs in the drive when needed and remove them after use.
- Store the CDs in suitable sleeves.
- Protect the CDs from exposure to heat and direct sunlight.

### Note on the laser

The CD-ROM/DVD drive contains a light-emitting diode (LED) classified according to IEC 825-1:1993:LASER CLASS 1.

### Modules with electrostatic-sensitive devices

Electrostatic-sensitive components are identified by the following sticker:

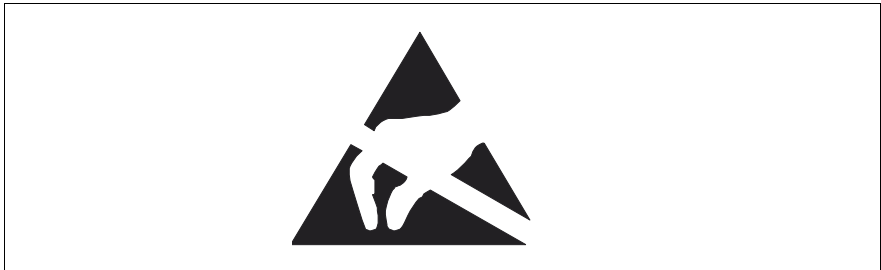


Figure 1: ESD label



### CAUTION!

When you handle components fitted with ESDs, you must observe the following points under all circumstances:

- Remove the power plug from the power socket before inserting or removing components containing ESDs.
- You must always discharge static build-up (e.g. by touching a grounded object) before working with such components.
- The equipment and tools you use must be free of static charge.
- Use a grounding cable designed for this purpose to connect yourself to the system unit as you install components.



**CAUTION!**

- Always hold components with ESDs at the points marked green (touch points).
- Do not touch any exposed pins or conductors on a component.
- Place all components on a static-free base.



You will find a detailed description of handling ESD components in the relevant European or international standards (EN 61340-5-1, ANSI/ESD S20.20).

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## 4 Preparation



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)

### 4.1 Pulling out / removing the server

- ▶ Exit all applications and shut down the server correctly.
- ▶ If your operating system has not switched off the sever, press the on/off switch.
- ▶ Unplug the power plugs.

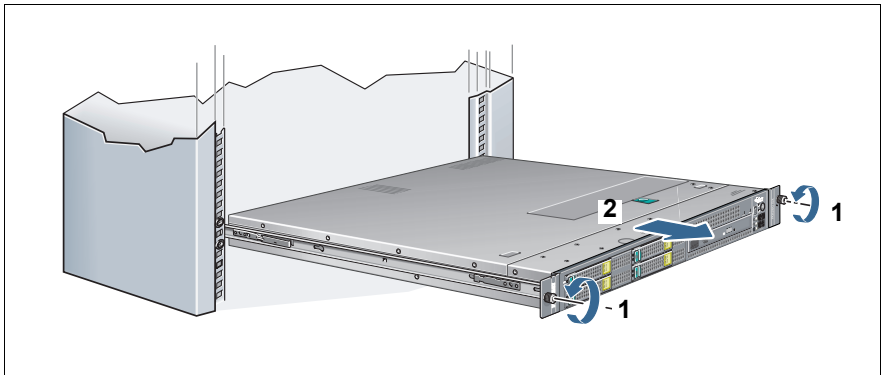


Figure 2: Pulling the server out of the rack

- ▶ Loosen the knurled screws (1) and pull the server carefully out of the rack (2) as far as possible.

If the server is difficult to reach in the rack after you have pulled it out, remove it completely from the rack. If you do not want to remove the server, skip this page.

**CAUTION!**

There is **no cable management** for the server in the rack!  
Before you remove the server from the rack, you must therefore unplug all cables connected to the server from their sockets.

**CAUTION!**

**At least two people are needed to lift the server out of the rack.**

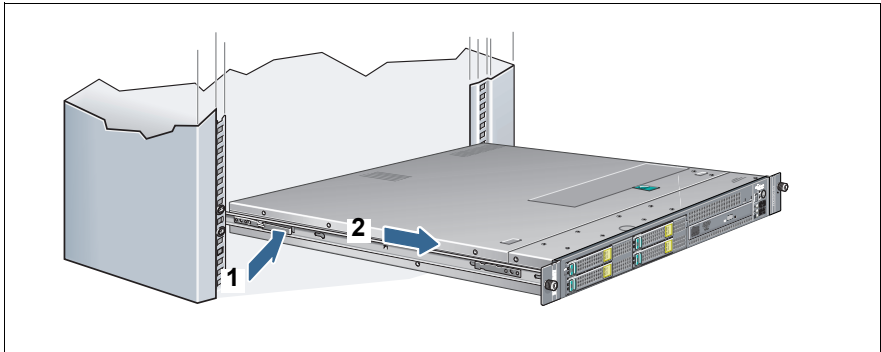


Figure 3: Removing the server from the rack

- ▶ Press the safety springs (1) on both sides and carefully pull the server forward a little (2).
- ▶ Pull the server off the rails and place it on a table or similar surface.

## 4.2 Opening the server

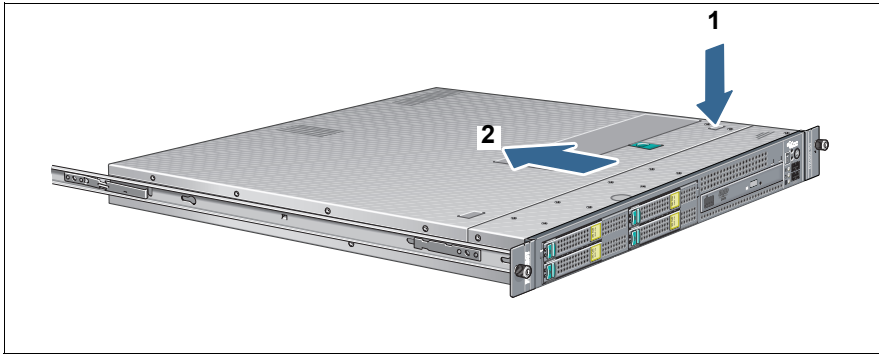


Figure 4: Removing the top cover

- For removing the top cover press the cover button downward (1).
- Slide the cover approx. 1 cm towards the rear of the server and lift it off (2).



## 5 Main Memory



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)

The system board supports up to 32 Gbytes of main memory. 8 slots (2 slots form a memory bank) are provided for the main memory. Each memory bank is equipped with two 512-Mbyte, 1-Gbyte, 2-Gbyte or 4-Gbyte FBD533/PC2-4200F or FBD667/PC2-5300F Fully Buffered DIMM memory modules.

ECC with memory scrubbing and with the Single Device Data Correction (SDDC, Chipkill) function is standard.

### 5.1 Population rules

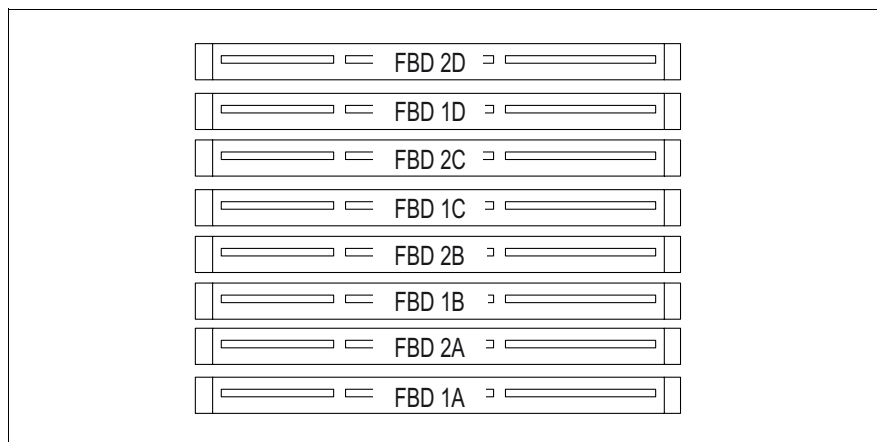


Figure 5: Structure of the main memory in memory banks and memory modules

- The memory modules have to be based on x4 or x8 organised FBD533/PC2-4200F or FBD667/PC2-5300F fully buffered DIMM modules and must be populated in pairs. You must only use memory modules released by Fujitsu Siemens Computers.
- Each pair must consist of identical memory modules (2 way interleaved mode).

- The module capacity between pairs can differ: e.g. pair 1A/1B can be populated with two 512 Mbyte modules and pair 2A/2B with two 1 Gbyte modules.

The table below shows the order in which the memory banks must be equipped:

<b>Bank 1: module pair 1A/1B</b>	<b>Bank 2: module pair 1C/1D</b>	<b>Bank 3: module pair 2A/2B</b>	<b>Bank 4: module pair 2C/2D</b>
Equipped	Empty	Empty	Empty
Equipped	Equipped	Empty	Empty
Equipped	Equipped	Equipped	Empty
Equipped	Equipped	Equipped	Equipped

### Memory mirroring

Either 4 or 4+4 identical memory modules are required for memory mirroring:

Memory bank	1		2		3		4	
Channel (module)	1A	1B	1C	1D	2A	2B	2C	2D
Equipment	4 identical memory modules				-		-	
	4 identical memory modules				4 identical memory modules			

## 5.2 Upgrading / replacing main memory

- ▶ Open the server as described in the [chapter “Preparation” on page 17f.](#)
- ▶ In order to make the slots' lateral ejector tabs more readily accessible, lift the air duct above the processors up and off.

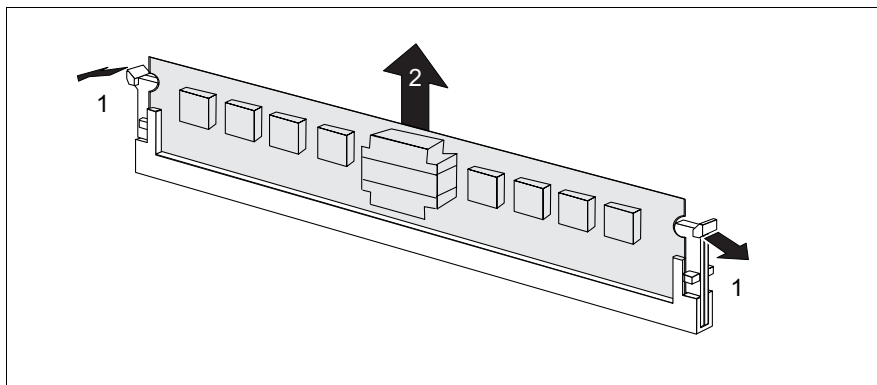


Figure 6: Removing a memory module

- ▶ Flip the ejector tabs on each side of the slot outward (1). This levers an installed memory module out of its slot.
- ▶ If the slot was already occupied: Remove the memory module from the slot (2).

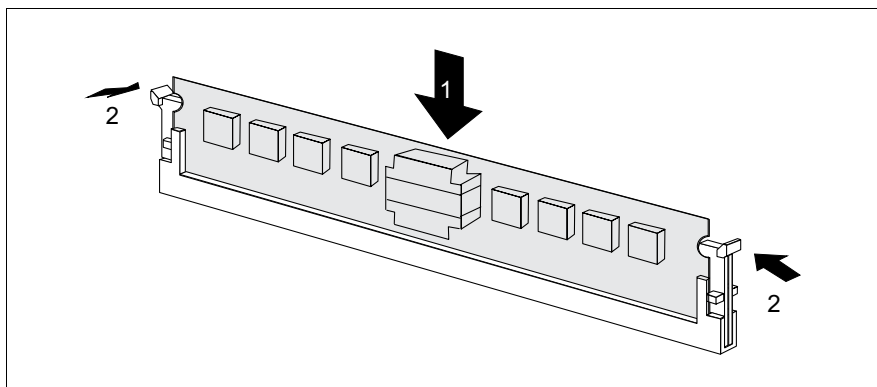


Figure 7: Installing a memory module

- Carefully press the memory module into the slot (1) until the ejector tabs on both sides of it engage (2).
- Reinstall the air duct. Ensure that the hooks on the air duct (see [figure 8](#)) engage on the fan's rear panel.



Figure 8: Hooks of the air duct

- Close the server, plug in the power plugs, and switch on the server as described in the [chapter "Completion" on page 41f.](#)

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## 6 Processors



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)



### CAUTION!

Processors are components which are extremely sensitive to electrostatic discharge and must be handled with caution.

When you take a processor out of its protective wrapper or out of a socket, place it on an insulated, antistatic surface with the smooth side down.

Never slide a processor over a surface.

### 6.1 Installing a second processor

The system board can be upgraded with a second processor.



### CAUTION!

You may only use processors of the same type. The second processor must have the same clock frequency as the first. For dual-processor mode use a suitable multiprocessor operating system.

- Open the server as described in the [chapter “Preparation” on page 17f.](#)

#### Removing the air duct

- Lift the air duct up and off.

### Removing the heat sink dummy

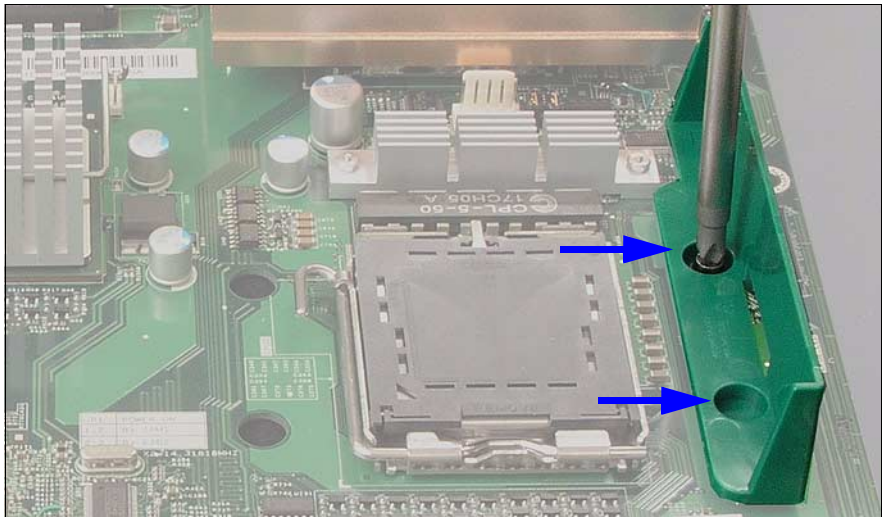


Figure 9: Removing the heat sink dummy

- Remove the two screws and lift out the heat sink dummy.

### Installing the processor

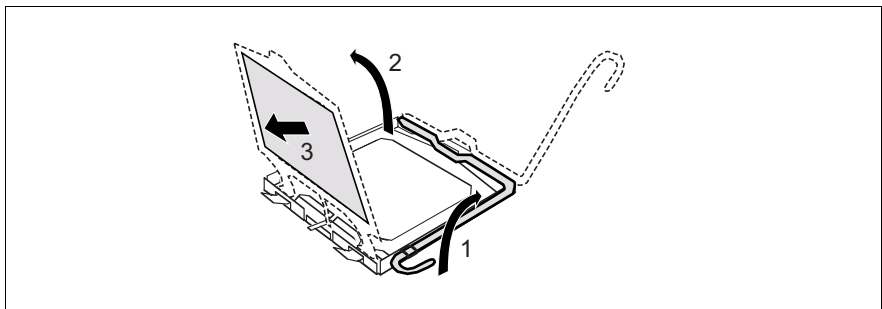


Figure 10: Opening the socket lever

- Release the socket lever by pressing it sideways and pull it upward as far as it will go (1).
- Open the cover (2).
- Remove the plastic cover (3).

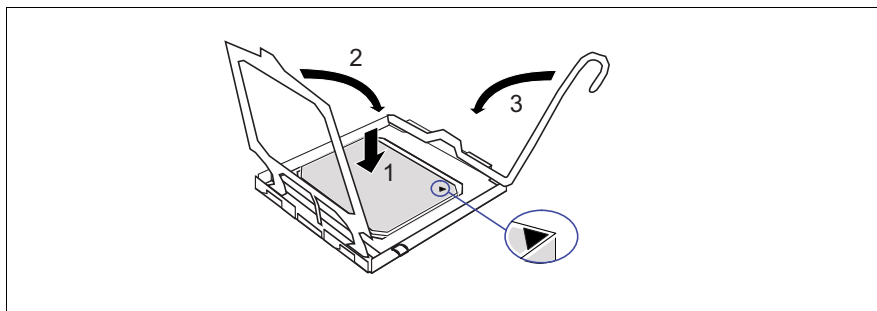


Figure 11: Installing the processor

- Position the new processor over the socket and then carefully press it into the socket (1).



**CAUTION!**

The processor can only be installed in one particular direction. Note the marking on one of the corners. To avoid damaging the pins or the processor, do not force it into the socket.

- Close the cover (2).
- Lock the processor in place in the socket by returning the socket lifter to its original position (3).

## Installing the heat sink

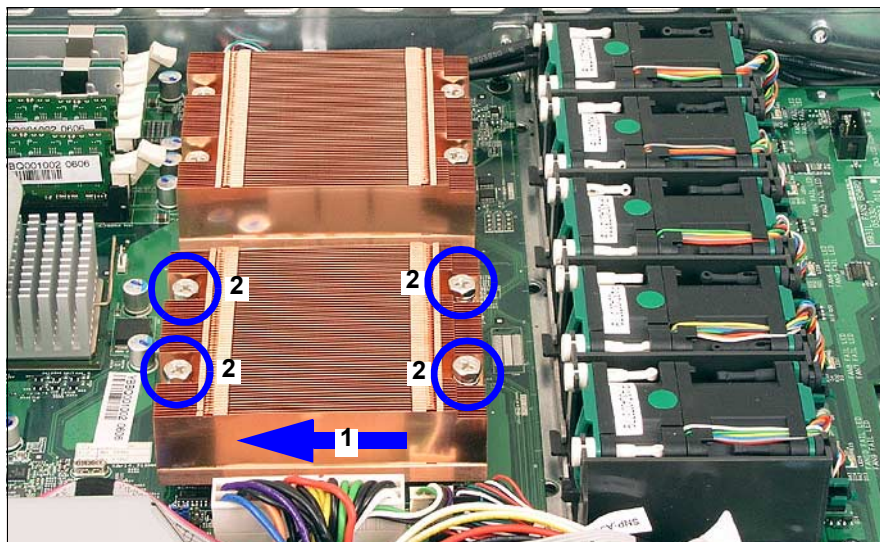


Figure 12: Installing the heat sink

- ▶ Fit the heat sink on the processor such that the airflow arrow (1) is facing the rear side of the server.
- ▶ Attach the heat sink with four screws. Tighten the screws in diagonally opposite sequence (2).



### CAUTION!

Never install a processor without a heat sink! The processor is likely to overheat, which may cause damage to the processor and the system board.

## Installing the air duct

- ▶ Reinstall the air duct. Reattach the air duct. Ensure that the hooks on the air duct (see [figure 8 on page 24](#)) engage on the fan's rear panel.
- ▶ Close the server, plug in the power plugs, and switch on the server as described in the [chapter "Completion" on page 41](#).

## 6.2 Exchanging the processor

**CAUTION!**

You may only use processors of the same type on the system board.

- ▶ Open the server as described in the [chapter “Preparation” on page 17f.](#)
- ▶ Lift the air duct up and off.

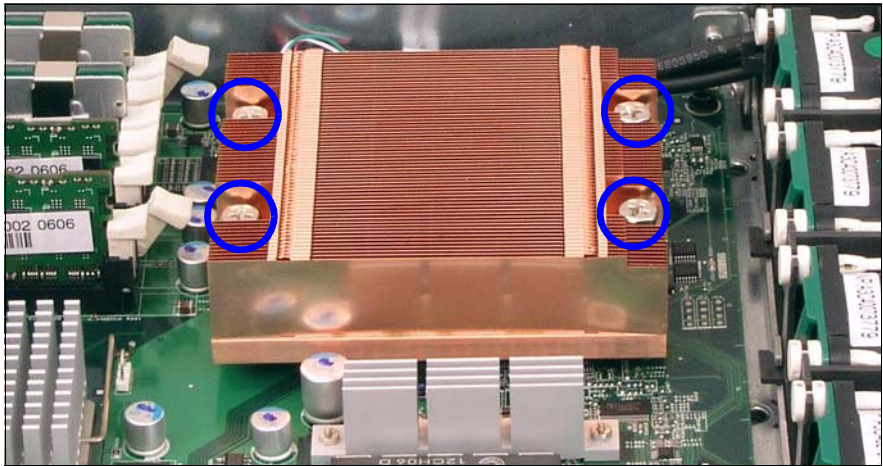


Figure 13: Removing the processor heat sink

- ▶ Remove the four screws of the heat sink in diagonally opposite sequence (see figure).
- ▶ Turn the heat sink carefully back and forth to loosen it. Then lift it out to remove it.
- ▶ Remove the residual thermal paste from the underside of the heat sink.
- ▶ Clean the underside of the heat sink using a lint-free cloth.

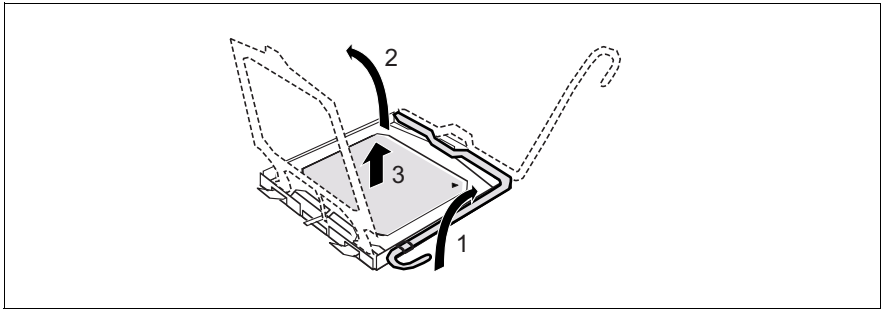


Figure 14: Removing the old processor

- ▶ Release the socket lifter by pressing it sideways and pull it upward as far as it will go (1).
- ▶ Open the cover (2).
- ▶ Lift the installed processor carefully out of the socket (3).

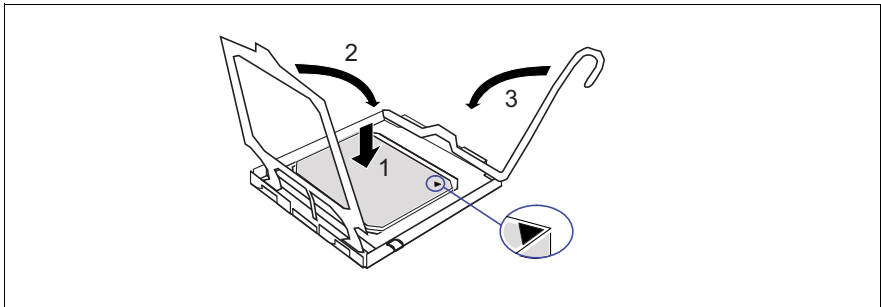


Figure 15: Installing the new processor

- ▶ Position the new processor over the socket and then carefully press it into the socket (1).

**CAUTION!**

The processor can only be installed in one particular direction. Note the marking on one of the corners. To avoid damaging the pins or the processor, do not force it into the socket.

- ▶ Close the cover (2).
- ▶ Lock the processor in place in the socket by returning the socket lever to its original position (3).

- ▶ Apply a small amount of thermal paste to the upper side of the new processor.
- ▶ Ensure a thin and even distribution of the thermal paste.
- ▶ Fit the heat sink on the processor such that the airflow arrow labeled is facing the rear side of the server.(see [page 28](#)).
- ▶ Fasten the heat sink by tightening the four screws in a crossover pattern.
- ▶ Reinstall the air duct. Ensure that the hooks on the air duct (see [figure 8 on page 24](#)) engage on the fan's rear panel.
- ▶ Close the server, plug in the power plugs, and switch on the server as described in the [chapter "Completion" on page 41](#).

## 6.3 Exchanging the heat sink

- ▶ Open the server as described in the [chapter “Preparation” on page 17f.](#)
- ▶ Remove the air duct.
- ▶ Remove the four screws of the heat sink in diagonally opposite sequence (see [page 29](#)).
- ▶ Turn the heat sink carefully back and forth to loosen it. Then lift it out to remove it.
- ▶ Clean the surface of the processor with a lint-free cloth.
- ▶ Fit the heat sink on the processor such that airflow arrow is facing to the rear side of the server (see [page 28](#)).
- ▶ Attach the heat sink with four screws. Tighten the screws in diagonally opposite sequence (see [page 28](#)).
- ▶ Reinstall the air duct. Ensure that the hooks on the air duct (see [figure 8 on page 24](#)) engage on the fan's rear panel.
- ▶ Close the server, plug in the power plugs, and switch on the server as described in the [chapter “Completion” on page 41f.](#)

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## 7 CD/DVD Drive



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)

The PRIMERGY RX200 S3 Server is equipped with a slimline bay intended for a CD/DVD drive. The mounting slot already contains an empty frame which must be removed for installing the CD/DVD drive.

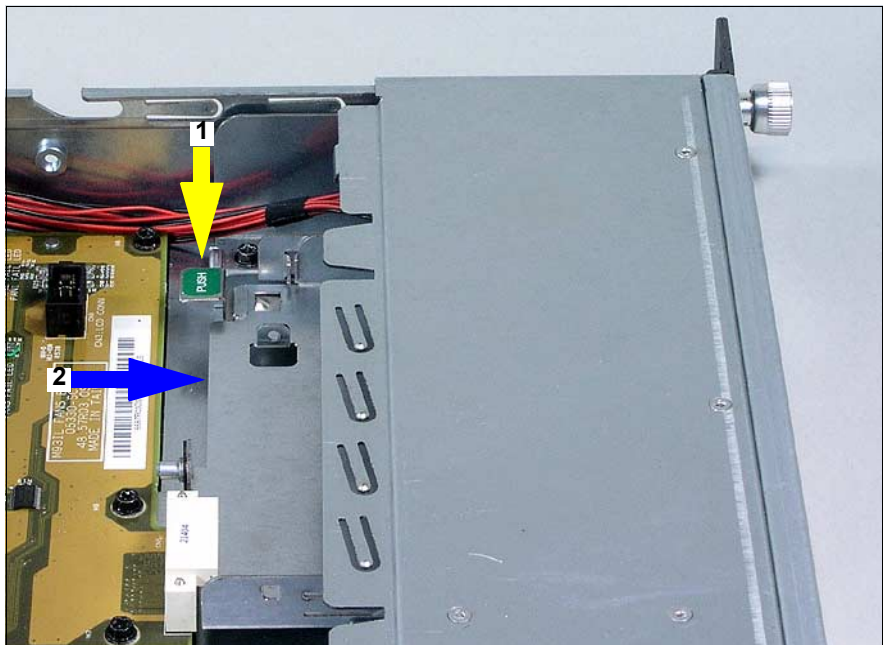


Figure 16: Removing the CD/DVD frame

- ▶ Push the green spring button (1).
- ▶ With the other hand push the frame out towards the front (2).



Figure 17: Installing the CD-ROM/DVD drive

- Angle the drive as shown above and install it in the two lateral hooks (see circles) on the frame.



Figure 18: Fastening the CD/DVD drive

- Fasten the CD/DVD drive using the two screws (see circles) on the frame.



Figure 19: Inserting the CD/DVD drive

- From the outside, slide the CD/DVD drive into the bay (1) until it engages in the connector (2).



## 8 Controllers in Non-Hot-Plug PCI Slots



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)

If you want to replace components which are not hot-pluggable, you must proceed as follows:

- ▶ Exit all applications and shut down the server correctly.
- ▶ If your operating system has not switched off the sever, press the on/off switch.
- ▶ Unplug the power plugs.

The system board has one PCI-X and one PCIe x8 slot. Because of the server's installation height, these can only be used via a riser card. Two different types of riser card are available here:

- Type A: Two slots for PCI-X controller  
Slot #1: 64 bit/100 MHz, low-profile, max. length 175 mm  
Slot #2: 64 bit/133 MHz, max. length 175 mm

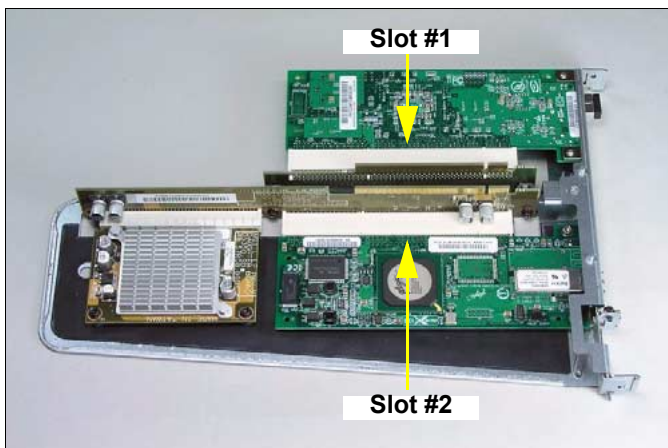


Figure 20: Riser card type A: 2\*PCI-X

- Type B: One slot each for a PCI-X and a PCIe controller  
Slot #1: 64 bit/100 MHz, low-profile, max. length 175 mm  
Slot #2: PCIe x8, max. length 315 mm

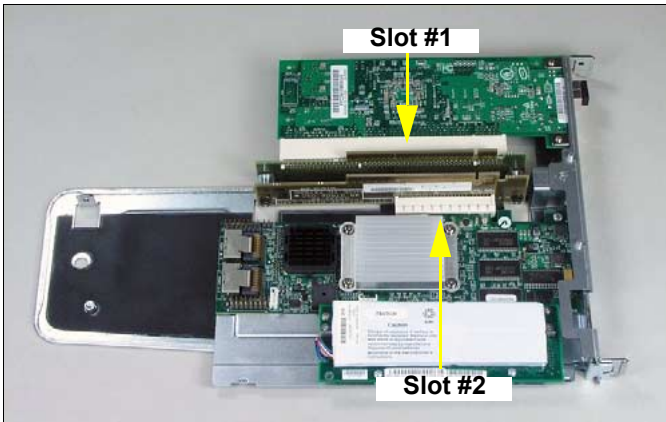


Figure 21: Riser card type B: 1\*PCI-X and 1\*PCIe-x8



Both slots are **not** hot-pluggable.

## 8.1 Installing controllers

- Open the server as described in the [chapter “Preparation” on page 17f.](#)

### Removing the riser card holder

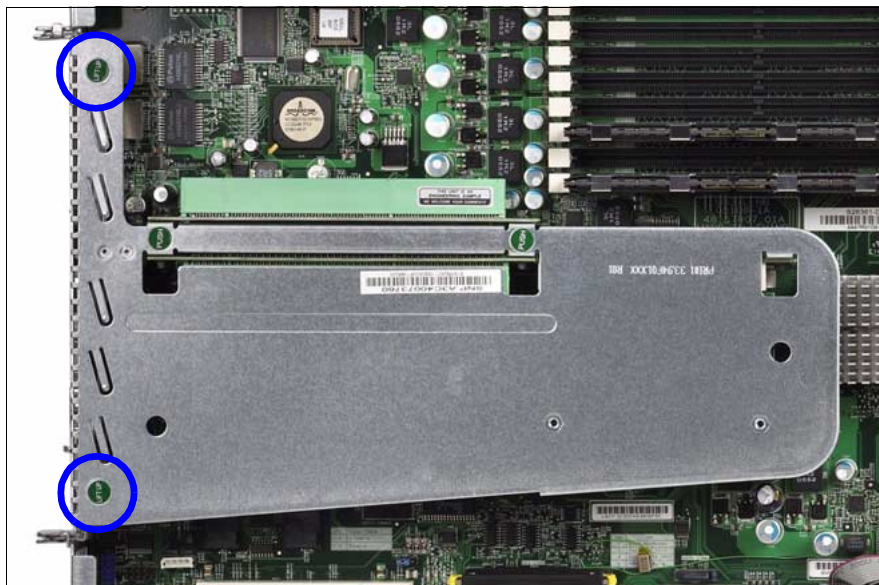


Figure 22: Removing the riser card holder

- Grasp the riser card at the two green points labeled with “LIFT UP” and pull it up and out.

### Installing a controller

- Please read the documentation supplied with the controller.
- Plug any necessary cables onto the controller.
- Remove the slot cover from the riser card holder.



Keep the slot cover for future use. If you remove the controller, you must reinstall the slot cover to comply with EMC regulations (regulations on electromagnetic compatibility) and to satisfy cooling requirements and fire protection measures.

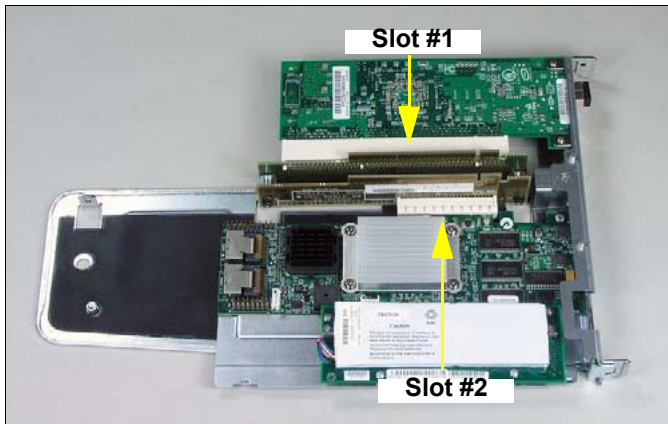


Figure 23: low profile: Slot #1; standard height or low profile: Slot #2

- ▶ Plug the board into the PCI slot on the riser card that is suitable for the height of the board.



Make sure that the slot cover fits into the appropriate recess.

- ▶ If necessary, plug in the cables on the board and other components.

### Reinstalling the riser card holder

- ▶ Position the riser card holder on the system board's PCI slots.
- ▶ Using the green points labeled with "PUSH", push the riser card carefully into the PCI slots.
- ▶ Close the server, plug in the power plugs, and switch on the server as described in the [chapter "Completion" on page 41f.](#)

---

## 9 Completion



### CAUTION!

Please observe the safety information in the [chapter “Safety Instructions” on page 11ff.](#)

### 9.1 Closing the server

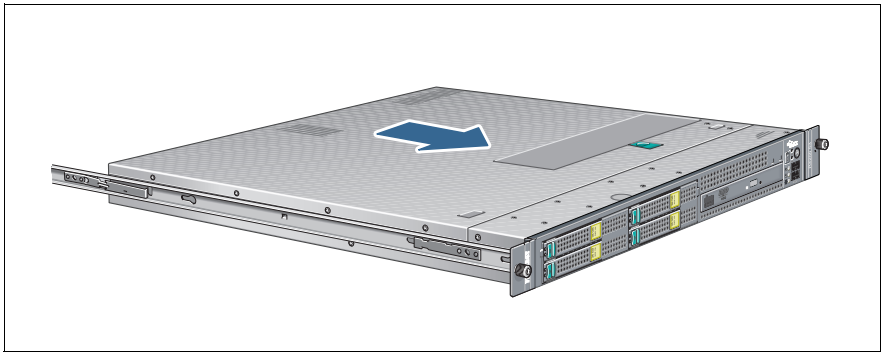


Figure 24: Installing the cover

- Position the top cover so that it projects approx. 1 cm to the rear.
- Push the top cover completely forward.  
The housing button will engage automatically.

## 9.2 Installing the server in the rack

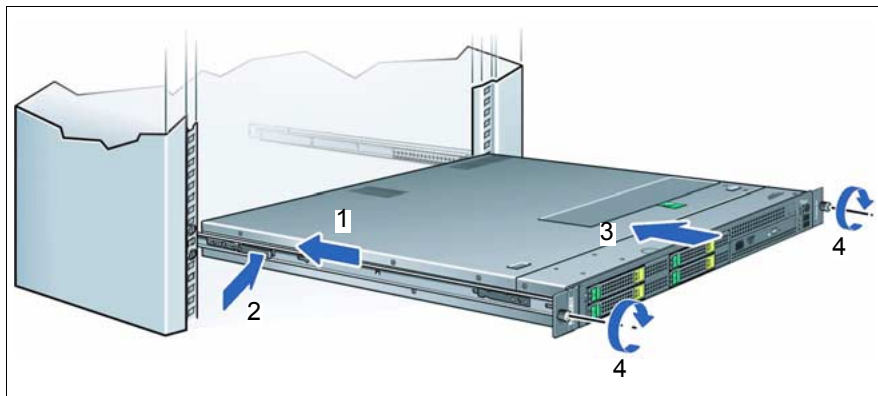


Figure 25: Installing the server in the rack



### CAUTION!

**At least two people are needed to position the server in the rack.**

- ▶ Push the prepared server into the rails that are attached to the rack until the server rails engage.



Ensure that the server is inserted horizontally and is not tilted.

- ▶ Press the safety springs in on both sides (2).
- ▶ Gently push the server as far as it will go into the rack (3).
- ▶ Fasten the server to the rack (4) using the two knurled screws (front panel).
- ▶ Plug in all plugs and switch the server on.

---

# Abbreviations

**AC**

Alternating Current

**ANSI**

American National Standards Institute

**ASR&R**

Automatic Server Reconfiguration and Restart

**ATA**

Advanced Technology Attachments

**BIOS**

Basic Input/Output System

**BMC**

Baseboard Management Controller

**CC**

Cache Coherency

**CD**

Compact Disk

**CD-ROM**

Compact Disk Read-Only Memory

**CHS**

Cylinder Head Sector

**CMOS**

Complementary Metal Oxide Semiconductor

**COM**

Communication

**CPU**

Central Processing Unit

**DC**

## Abbreviations

---

Direct Current

### **DIMM**

Dual Inline Memory Module

### **DIP**

Dual Inline Package

### **DMA**

Direct Memory Access

### **DMI**

Desktop Management Interface

### **ECC**

Error Checking and Correcting

### **ECP**

Extended Capabilities Port

### **EEPROM**

Electrically Erasable Programmable Read-Only Memory

### **EMC**

ElectroMagnetic Compatibility

### **EMP**

Emergency Management Port

### **EPP**

Enhanced Parallel Port

### **ESD**

Electrostatic-Sensitive Devices

### **FPC**

Front Panel Controller

### **FRU**

Field Replaceable Unit

### **FSB**

Front Side Bus

**GAM**

Global Array Manager

**GUI**

Graphical User Interface

**HDD**

Hard Disk Drive

**HSC**

Hot-Swap Controller

**I<sup>2</sup>C**

Inter-Integrated Circuit

**I/O**

Input/Output

**ICM**

Intelligent Chassis Management

**ID**

Identification

**IDE**

Integrated Drive Electronics

**IRQ**

Interrupt Request Line

**LAN**

Local Area Network

**LBA**

Logical Block Address

**LCD**

Liquid Crystal Display

**LUN**

## Abbreviations

---

	Logical Unit Number
<b>LVD</b>	Low-Voltage Differential SCSI
<b>MMF</b>	Multi-Mode Fiber
<b>MRL</b>	Manual-Retention Latch
<b>NMI</b>	Non-Maskable Interrupt
<b>NVRAM</b>	Non-Volatile Random Access Memory
<b>OS</b>	Operating System
<b>PCI</b>	Peripheral Component Interconnect
<b>PDA</b>	Prefailure Detection and Analysis
<b>POST</b>	Power-ON Self-Test
<b>RAID</b>	Redundant Arrays of Independent Disks
<b>RAM</b>	Random Access Memory
<b>ROM</b>	Read-Only Memory
<b>RSB</b>	Remote Service Board
<b>RTC</b>	

Real-Time Clock

**RTDS**

Remote Test and Diagnosis System

**SAF-TE**

SCSI Accessed Fault-Tolerance Enclosures

**SAS**

Serial Attached SCSI

**SATA**

Serial ATA

**SBE**

Single-Bit Error

**SCA**

Single-Connector Attachment

**SCSI**

Small Computer System Interface

**SDR**

Sensor Data Record

**SDRAM**

Synchronous Dynamic Random Access Memory

**SEL**

System Event Log

**SMI**

System Management Interrupt

**SSU**

System Setup Utility

**SVGA**

Super Video Graphics Adapter

**USB**

## Abbreviations

---

Universal Serial Bus

### **VGA**

Video Graphics Adapter

### **ZCR**

Zero Channel RAID

---

## Related publications

PRIMERGY manuals are available as PDF file on the ServerBooks CD. The **ServerBooks** CD is part of the **ServerStart Bundle** delivered with each server system.

The actual version of the necessary manuals can be downloaded free of charge from the Internet. The overview page showing the online documentation available in the Internet can be found via the URL:

*<http://manuals.fujitsu-siemens.com> (choose: industry standard servers).*

- [1] **Safety notes and other important information**
- [2] **Ergonomics**
- [3] **Warranty**
- [4] **System Board D2300**  
Technical Manual
- [5] **BIOS-Setup**  
Reference Manual
- [6] **PRIMERGY RX200 S3**  
Operating Manual
- [7] **Quick Start Hardware - PRIMERGY RX200 S3**  
Leaflet
- [8] **Quick Start Software - PRIMERGY ServerView Suite**  
Leaflet
- [9] **PRIMERGY ServerView Suite**  
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## Related publications

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- [12] **Integrated Mirroring**  
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- [16] **PRIMERGY ServerView Suite  
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- [19] **LSI Logic MegaRAID SAS Software**  
User's Guide
- [20] **LSI Logic MegaRAID SAS Device Driver**  
Installation
- [21] **Integrated SAS for RAID**  
User's Guide

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Submitted by

Comments  
Suggestions  
Corrections

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Comments on PRIMERGY RX200 S3  
Server System





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